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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,934	04/05/2002	Shoichi Kaneda	740675-42	1209

22204 7590 10/02/2003

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EXAMINER

DONOVAN, LINCOLN D

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,934

Applicant(s)

KANEDA ET AL.

Examiner

Lincoln Donovan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8/2, 9/2-3, 9/5, 10, 16/10 is/are rejected.
- 7) ☒ Claim(s) 4-7, 8/7, 9/7, 11-15, 16/11-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: in line 6, "on inward" should be corrected as -- on an inward ---.
2. Claim 4 is objected to because of the following informalities: in line 7, "opens" should be corrected as --- open ---. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 2-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, line 16, applicant should clarify the structure and mounting of the "pad of elastic material sandwiched between the open side of the housing and the circuit board.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda [US 6,590,991] in view of Bleim et al. [US 6,038,327].

Regarding claim 1, Maeda discloses an electromagnetic induction actuator [20] comprising:

- a cylindrical housing [10];
- a magnetic circuit having a pole piece [4] and a magnet [3] connected as one piece, a yoke [2] that holds the pole piece together with the magnet and a magnetic gap [figure 1] formed between the yoke and the pole piece,
- spring pieces [1, figure 1, column 8, lines 10-19] suspending the magnetic circuit within the housing;
- at least one diaphragm [8] which attaches a voice coil/sound generating means [7, 9, figure 6] on an inward surface side of the housing at an open end thereof;
- metal terminals [13a, 14a] attached to a terminal block [figure 7] that projects outward from the side wall of the housing;
- lead wires [figure 10] electrically connecting the terminals to the voice coil/sound generating means; and
- a printed circuit board [21] having a conduction pattern [21b-c] for receiving the metal terminals.

Maeda disclose the instant claimed invention except for the terminal attached to the terminal block being formed as a leaf spring with a v-shaped tip for pressing down against the conduction pattern on a circuit board.

Bleim et al. disclose a terminal used for an electroacoustic transducer having a terminal with a substantially v-shape connection tip end for connection to a printed circuit board [figure 2].

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the terminal end design of Bleim et al., for the terminals of Maeda, for the purpose of improving contact pressure applied to the circuit.

Regarding claims 2-3, Maeda disclose the instant claimed invention except for an elastic pad being sandwiched between the open end of the housing and the circuit board.

Bleim et al. further disclose a deformable elastic support member [39] mounted between the open end of the housing and the circuit board.

It would have been obvious to a person having ordinary skill in the art at the time invention was made to include an elastic member mounted between the open end of the housing and the circuit board in Maeda, as modified, for the purpose of reducing unwanted vibration.

Regarding claims 9/(2-3 and 5), Maeda disclose the instant claimed invention except for the device being used in a portable telephone.

Bleim et al. further disclose the electroacoustic device being used within a portable telephone [62, figure 8].

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the inductor device of Maeda, as modified, in a telephone, as further suggested by Bleim et al., for the purpose of facilitating mounting of the inductor device.

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7. Claims 10 and 16/10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda, as modified, as applied to claims 1 and 9 above, and further in view of Teshima et al. [EPO 1044730].

Maeda, as modified, disclose the instant claimed invention except for the voice coil diaphragm being mounted adjacent the circuit board.

Teshima et al. disclose an acoustic inductor having a voice coil diaphragm being mounted adjacent the base of the inductor assembly.

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the diaphragm mounting design of Teshima et al. in Maeda for the purpose of protecting the diaphragm from contaminants.

Allowable Subject Matter

8. Claims 11-16/11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4-8/(2-3, 5 and 7) and 9/7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

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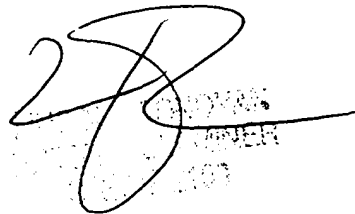
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lincoln Donovan whose telephone number is 703 308-3111.

The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (703) 308-7619. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1920.

ldd
9/17/03

A handwritten signature in black ink, appearing to be 'LD', with a horizontal line extending to the right. The signature is positioned over a faint, circular, dotted stamp.